

RAW SEQUENCE LISTING

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Information Center (STIC) no errors detected.**

Application Serial Number: 09/528,682A
Source: 1Fw16
Date Processed by STIC: 12/29/05

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IFW16

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/528,682A

DATE: 12/29/2005

TIME: 09:20:21

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\12292005\I528682A.raw

3 <110> APPLICANT: Pizza, Mariagrazia
 4 Giuliani, Marzia M
 5 Rappuoli, Rino
 7 <120> TITLE OF INVENTION: IMMUNOGENIC DETOXIFIED MUTANT E. COLI LT-A-TOXIN
 9 <130> FILE REFERENCE: 2302-0342.10
 11 <140> CURRENT APPLICATION NUMBER: 09/528,682A
 12 <141> CURRENT FILING DATE: 2000-03-20
 14 <150> PRIOR APPLICATION NUMBER: PCT/IB97/01440
 15 <151> PRIOR FILING DATE: 1997-10-30
 17 <150> PRIOR APPLICATION NUMBER: 09/297,171
 18 <151> PRIOR FILING DATE: 1999-04-27
 20 <160> NUMBER OF SEQ ID NOS: 5
 22 <170> SOFTWARE: PatentIn Ver. 2.0
 24 <210> SEQ ID NO: 1
 25 <211> LENGTH: 240
 26 <212> TYPE: PRT
 27 <213> ORGANISM: Escherichia coli
 29 <400> SEQUENCE: 1
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 33 Lys Arg Ser Gly Gly Leu Met Pro Arg Gly His Asn Glu Tyr Phe Asp
 34 20 25 30
 36 Arg Gly Thr Gln Met Asn Ile Asn Leu Tyr Asp His Ala Arg Gly Thr
 37 35 40 45
 39 Gln Thr Gly Phe Val Arg Tyr Asp Asp Gly Tyr Val Ser Thr Ser Leu
 40 50 55 60
 42 Ser Leu Arg Ser Ala His Leu Ala Gly Gln Ser Ile Leu Ser Gly Tyr
 43 65 70 75 80
 45 Ser Thr Tyr Tyr Ile Tyr Val Ile Ala Thr Ala Pro Asn Met Phe Asn
 46 85 90 95
 48 Val Asn Asp Val Leu Gly Val Tyr Ser Pro His Pro Tyr Glu Gln Glu
 49 100 105 110
 51 Val Ser Ala Leu Gly Gly Ile Pro Tyr Ser Gln Ile Tyr Gly Trp Tyr
 52 115 120 125
 54 Arg Val Asn Phe Gly Val Ile Asp Glu Arg Leu His Arg Asn Arg Glu
 55 130 135 140
 57 Tyr Arg Asp Arg Tyr Tyr Arg Asn Leu Asn Ile Ala Pro Ala Glu Asp
 58 145 150 155 160
 60 Gly Tyr Arg Leu Ala Gly Phe Pro Pro Asp His Gln Ala Trp Arg Glu
 61 165 170 175
 63 Glu Pro Trp Ile His His Ala Pro Gln Gly Cys Gly Asn Ser Ser Arg
 64 180 185 190
 66 Thr Ile Thr Gly Asp Thr Cys Asn Glu Glu Thr Gln Asn Leu Ser Thr

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67      195          200          205
69 Ile Tyr Leu Arg Glu Tyr Gln Ser Lys Val Lys Arg Gln Ile Phe Ser
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81 <212> TYPE: PRT
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90 <211> LENGTH: 107
91 <212> TYPE: PRT
92 <213> ORGANISM: Escherichia coli
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98 Asn Thr Asn Thr Val Thr Gln Ile Asn Gly Ser Asn Glu Val Pro Leu
99   20          25          30
101 Asp Gly Arg Tyr Ser Asn Phe Ala Leu Ile Ser Ala Glu Gly Gly Met
102   35          40          45
104 Gln Asp Gly Asp Leu Phe Gly Thr Val Asn Gln Ser Asn Phe Pro Met
105   50          55          60
107 Ser Thr Phe Glu Gln Val Pro Asn Asn Lys Glu Phe Lys Gly Val Ile
108   65          70          75          80
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127   20          25          30
129 Asp Gly Arg Tyr Ser Asn Tyr Ala Leu Ile Ser Ala Glu Gly Gly Met
130   35          40          45
132 Asp Arg Asp Leu Phe Gly Ser Ala Asn Ile Asp Gly Phe Pro Glu Val
133   50          55          60
135 Arg Glu Phe Asn Ser Leu Pro Asn Asn Lys Ala Ser Ser Asp Thr Ala
136   65          70          75          80
138 Ser Leu Asn Lys Gln His Asp Ala Asp Phe Lys Lys Tyr Ile Lys Leu
139   85          90          95
141 Leu Ile Asn Asn Asp Gly Phe Phe Ser Asn Asn Gly Gly Lys

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142 100
 145 <210> SEQ ID NO: 5
 146 <211> LENGTH: 240
 147 <212> TYPE: PRT
 148 <213> ORGANISM: Escherichia coli
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 152 1 5 10 15
 154 Lys Arg Ser Gly Gly Leu Met Pro Arg Gly His Asn Glu Tyr Phe Asp
 155 20 25 30
 157 Arg Gly Thr Gln Met Asn Ile Asn Leu Tyr Asp His Ala Arg Gly Thr
 158 35 40 45
 160 Gln Thr Gly Phe Val Arg Tyr Asp Asp Gly Tyr Val Ser Thr Ser Leu
 161 50 55 60
 163 Ser Leu Arg Ser Ala His Leu Ala Gly Gln Ser Ile Leu Ser Gly Tyr
 164 65 70 75 80
 166 Ser Thr Tyr Tyr Ile Tyr Val Ile Ala Thr Ala Pro Asn Met Phe Asn
 167 85 90 95
 169 Val Asn Asp Val Leu Gly Val Tyr Ser Pro His Pro Tyr Glu Gln Lys
 170 100 105 110
 172 Val Ser Ala Leu Gly Gly Ile Pro Tyr Ser Gln Ile Tyr Gly Trp Tyr
 173 115 120 125
 175 Arg Val Asn Phe Gly Val Ile Asp Glu Arg Leu His Gly Asn Arg Glu
 176 130 135 140
 178 Tyr Arg Asp Arg Tyr Tyr Arg Asn Leu Asn Ile Ala Pro Ala Glu Asp
 179 145 150 155 160
 181 Gly Tyr Arg Leu Ala Gly Phe Pro Pro Asp His Gln Ala Trp Arg Glu
 182 165 170 175
 184 Glu Pro Trp Ile His His Ala Pro Gln Gly Cys Gly Asn Ser Ser Arg
 185 180 185 190
 187 Thr Ile Thr Gly Asp Thr Cys Asn Glu Glu Thr Gln Asn Leu Ser Thr
 188 195 200 205
 190 Ile Tyr Leu Arg Glu Tyr Gln Ser Lys Val Lys Arg Gln Ile Phe Ser
 191 210 215 220
 193 Asp Tyr Gln Ser Glu Val Asp Ile Tyr Asn Arg Ile Arg Asp Glu Leu
 194 225 230 235 240

VERIFICATION SUMMARY

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